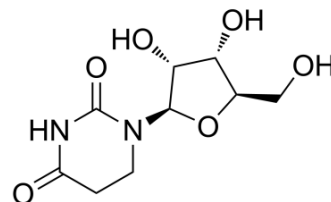


## 5,6-Dihydrouridine

|                    |                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-113047                                                                                      |
| CAS No.:           | 5627-05-4                                                                                      |
| Molecular Formula: | C <sub>9</sub> H <sub>14</sub> N <sub>2</sub> O <sub>6</sub>                                   |
| Molecular Weight:  | 246.22                                                                                         |
| Target:            | Endogenous Metabolite                                                                          |
| Pathway:           | Metabolic Enzyme/Protease                                                                      |
| Storage:           | 4°C, protect from light<br>* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light) |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 125 mg/mL (507.68 mM)  
 H<sub>2</sub>O : 100 mg/mL (406.14 mM; Need ultrasonic)  
 \* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent Concentration | Mass      |            |            |
|---------------------------|-----------------------|-----------|------------|------------|
|                           |                       | 1 mg      | 5 mg       | 10 mg      |
|                           | 1 mM                  | 4.0614 mL | 20.3070 mL | 40.6141 mL |
|                           | 5 mM                  | 0.8123 mL | 4.0614 mL  | 8.1228 mL  |
|                           | 10 mM                 | 0.4061 mL | 2.0307 mL  | 4.0614 mL  |

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (8.45 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (8.45 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (8.45 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

5,6-Dihydrouridine is a modified base found in conserved positions in the D-loop of tRNA in Bacteria, Eukaryota, and some Archaea.

#### IC<sub>50</sub> & Target

Human Endogenous Metabolite

#### In Vitro

5,6-Dihydrouridine (Dihydrouridine) is one of the posttranscriptionally modified nucleosides. It is a product of the reduction of uridine (U), and can be further modified to 5-methyldihydrouridine (m5D). 5,6-Dihydrouridine is commonly present in the

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tRNA from Bacteria, Eukaryota, and some Archaea. It is identified in six positions in the “D-loop” of the tRNA (16, 17, 20a, 20b) and in position 47 in the variable loop<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Int J Mol Sci. 2019 Aug 8;20(16):3873.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Kasprzak JM, et al. Molecular evolution of dihydrouridine synthases. BMC Bioinformatics. 2012 Jun 28;13:153.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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